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**Visual Impacts on the Westward Vista
at Nine-mile Prairie and the
Inadequacy of the LES Power Line
Siting Criteria to Address Them**

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September 5, 2005

Visual Impacts at Nine-mile Prairie

The Nine-mile Prairie rolls across the Nebraska landscape nearly two hundred feet above the city of Lincoln. To the south, east and north lay areas for future low-rise urban growth most likely in the next 25-50 years. However to the west, urbanization will probably come only in the later part of the 21st century. Existing visual intrusions occur with the water tank to the southeast, former A-bomb bunkers to the north an acreage and UNL Challenge course to the south.

The higher topographic setting and the extent of the prairie make its visual context a prominent feature of the user's experience. Users include local students, the general public, and regional, national and international researchers and tour groups. Many come to experience one of the characteristics recorded in early explorers' and pioneers' journals about prairies namely the prairie's spatial extent and seeming vastness. A good part of the aesthetics of prairies emerges from the distant views and lack of visual intrusion. Aesthetic conditions connect the viewer to a place and provide an important emotional context to the prairie's scientific and physical features. For many visitors such as children the aesthetic connection provides **the** major experience of Nine-mile Prairie. They are able imagine in their mind's eye a scene as it may have appeared to a settler or Native American.

Aesthetics is the study of "beauty". Discussion of it often brings a snort of indifference from many people -- like it is some sort of wishy-washy, touchy-feely hogwash. Those uncomfortable with aesthetics may think it is not rational and most likely found in the eye of the beholder. Beauty is big business however, to those for example in the cosmetics industry, or those who "spruce up" their homes with paint and plants hoping to reap a higher sales price. So how can we apply an aesthetic concept of beauty to a piece of prairie landscape?

There are at least three approaches to the understanding of beauty. The first is that any beauty, which exists, is merely present in the object. In short, beauty is objective. This approach has trouble explaining why the beauty in an art object or view is described differently even by experts or even more perplexingly why experts disagree about the properties which make it up.

A second approach is that beauty is simply in the eye of the beholder. Everyone is different and so the concept of beauty is subjective. Therefore it is different for everyone and we are not able to make any generalizations about it. If that is true then why do some great and enduring works of art not bring an expression of ambivalence? Why are certain views preserved? Why do aesthetic assessments that have been carried out across a wide variety of landscapes (grand and common and involving thousands of viewers from wide backgrounds) find that certain landscape features are preferred? These studies' conclusions provide a wide, almost universal agreement on what makes up the preferred visual environment: Landscapes that appear more natural are more highly preferred.

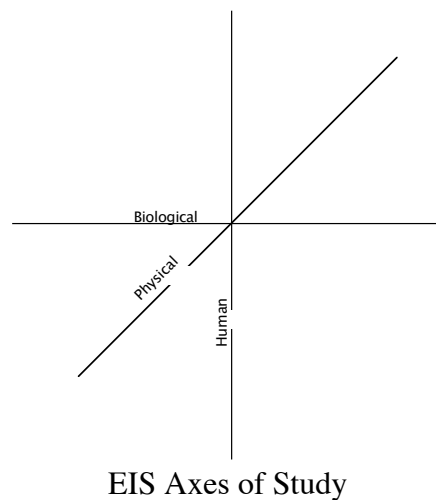
A third approach understands the elements of truth in both the objective and subject approaches to beauty and attempts to provide a wider more inclusive context for them. It is called an instrumental approach. In it two conditions must occur and if either one is lacking then the chances for experience of beauty are diminished or unrealized. The first condition that must be present involves the object on which the viewer focuses. If that object is fractured and lacks continuity, or is embedded so much in its surroundings that it can not be recognized, or is of such awkward balance or proportion that it repulses our gaze then the experience is not one which would be described as beautiful. Second, the viewer must be receptive. He or she must have the right side of his or her brain activated. The right hemisphere of the brain understands and seeks meaning in the spatial and relational elements of visual design namely, color, texture, form and space. If the viewer is preoccupied with other thoughts, then an aesthetic experience of beauty is unlikely. Instrumental beauty requires both a receptive mind and a pleasing object.

While the towers and lines of a 345/115 KV power transmission line may be objects in and of themselves that possess a rational, regular beauty, they fail in the context of prairie because they are out of place in a view that focuses upon the vastness of the natural world. Their strongly vertical contrasts, overpower the rolling horizontal expanse of prairie. The scale of the towers and their lines subvert the singular context of prairie. In an urban context with large man-made features such as buildings, roads, billboards etc. power lines are simply another element in an already visually chaotic environment. They do not fit in a prairie landscape.

Inadequacy of LES Power Line Criteria

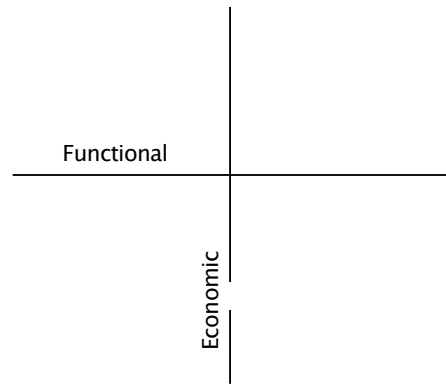
Since the initiation of the National Environmental Policy Act in the late 1960's, major federal actions, which affect the physical, biological and human environment, have required an Environmental Impact Statement (EIS) that studies alternatives, the consequences and mitigation thereof. Major interstate power transmission lines are required to complete an EIS. The proposed 345/115 KV lines while of the type and size of an interstate transmission line, do not require either state review (Power Review Board) or an EIS under the Federal, Energy Regulatory Commission. This is problematic, because the environmental impacts for residents in Lincoln and Lancaster County from such a "local" line are the same as an interstate line.

As noted above the EIS study looks in detail at three broad axes of impacts on the Physical, Biological and Human realms. Included on the human realm are sociological, historical, economic and aesthetic impacts. On the biological axis are impacts to wetlands, endangered species etc.



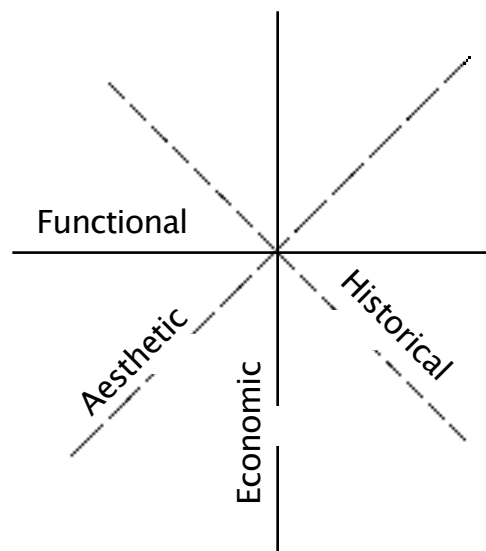
The LES study criteria are much more circumscribed and focus only on part of the human axis of the EIS. They include a rating scale:

45%	Houses and schools (Economic)
20%	Easement area (Economic)
10%	Restricted O & M access (Functional and Economic)
10%	Route length (Economic)
5%	Buildings (Economic)
5%	Trees (Functional)
5%	Angles (Functional)



Sub-Axes of Study on the Human Axis in the Existing LES Criteria

What are missing from the mostly human axis of the LES criteria include interests in aesthetics and historical significance and concern for physical and biological impacts.



More inclusive study Axes

The recently completed corridor selection for the proposed 345/115 KV transmission line from NW 12th and Arbor Road to NW 68th and Holdrege relied on the above criteria list and selected a proposed route based on the total criteria score. However, the criteria were not the only factor used in the selection of the corridor. Flight path restrictions on the height of obstructions adjacent to the Lincoln Municipal Airport were also apparently taken into account thus creating a precedent for using factors outside the criteria scoring list.

So the current criteria process has taken outside factors into account, but has not explicitly or implicitly examined the biological or the aesthetic impacts as do power line routing studies completed elsewhere. What would such an aesthetic impact study process address?

Methodology for Assessing Visual/Aesthetic Impacts

The United State Forest Service and the Bureau of Land Management as stewards of large public open spaces have developed methodologies to address visual impacts of power transmission lines. Those agencies in a three-step process for each proposed corridors assess 1) the visual quality of the existing landscape 2) the viewer sensitivity to the proposed transmission line and associated ROW clearance and 3) the visibility of the proposed line and ROW disturbance. In terms of was discussed earlier this is an instrumental approach to landscape beauty in which 1) and 3) above deal with the object aspects and 2) deals with the subjective affects on the viewer.

The Bonneville Power Administration, no stranger to rural power transmission lines, in a 2002 draft EIS for the McNary-John Day Transmission Project in Oregon described the above activities thusly:

“Visual quality is described as the visual patterns created by the combination of rural landscapes and developed features in the project vicinity. Visual quality [can be] assessed using the following descriptions.

Rural landscapes. These landscapes exhibit reasonably attractive natural and developed features/patterns, although they are not visually distinctive or unusual within the region. The landscape provides positive visual experiences such as the presence of natural open space interspersed with existing agricultural areas (farms, fields, etc.).

Scenic/distinctive landscapes. These exhibit distinctive and memorable visual features (such as landforms, rock outcrops, streams/rivers, scenic vistas) and patterns (vegetation, open space) that usually occur in an undisturbed rural setting but may also be found in an urban setting.”

(The westward vista at Nine-mile prairie would fall into this category.) Furthermore,

“Viewer sensitivity is described as a combination of viewer type, viewer exposure (number of viewers and view frequency), view orientation, view duration, and viewer awareness/sensitivity to visual changes in the project vicinity.”

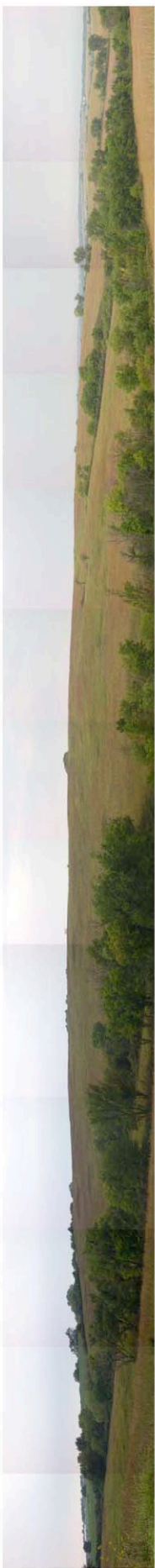
The types of viewers in the project vicinity would include visitors to Nine-mile Prairie, travelers and rural residents.”

Visibility is determined by finding and assessing critical viewpoints then assessing whether the transmission line can be seen, and if so how much. While there are many sensitive viewpoints in the corridor, the westward vista from Nine-mile prairies is the most critical. That view along with the associated research from 100 years ago and its unplowed state have recommended the site to the National Register of Historic Places.

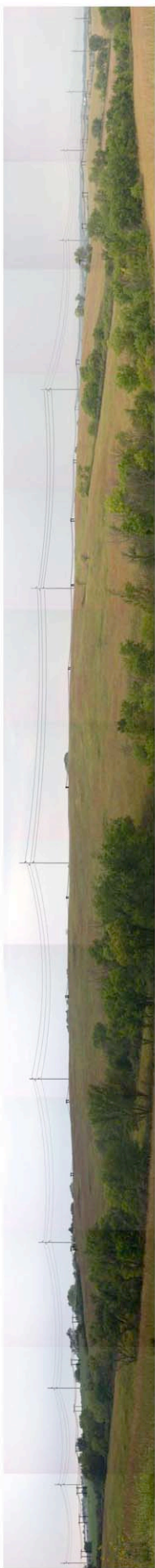
Once these assessments are done then a description and rating of the aesthetic impacts of a transmission line can be made, in which an estimate and ranking of the various corridors can be determined. The process, like the existing LES Criteria list, requires judgment from professionals trained in visual impact analysis. It may require public assessment of visual preferences or simulations of the proposed transmission line. Visual simulations are very useful in that they can give a glimpse into the future visual quality of a proposed power line and its corridor before it is built. The public can view and understand the transmission line’s scope and setting. The studies are done so that when a final route is selected documentation exists about the process, the choices made and the alternatives not taken.

Conclusion

The process used with the LES Criteria does not protect important open spaces and vistas in our local landscape, the ones we see and use everyday. For example, there is little or nothing in the LES Criteria list to keep a power transmission line out of Pioneers Park or from crossing Wyuka Cemetery (both also listed on the National Register of Historic Places), nothing to keep it from marring the view down the vista to the Nebraska Capitol from Holmes Lake Park, nothing to protect Lincoln’s entries, and nothing to keep it from enclosing and disrupting the view across Spring Creek Prairie, Mahoney Golf Course or Wagon Train Lake. In fact the criteria list is biased **against** natural public open spaces and any rural areas, because by definition an open space has no houses or buildings (50% of the total on the LES Criteria List!). In fact any open space that is now free from the encumbrances of a web of towers and steel wires can easily and may likely be selected as a transmission line corridor. The existing LES Criteria list is no longer (and probably never has been) adequate for protecting the biological, aesthetic and historical integrity of our environment. Now is the time to change it and correct oversights.



VIEW WEST FROM NINE-MILE PRAIRIE



SIMULATION OF PROPOSED LES 345 KV TRANSMISSION LINE

Many concerned citizens have expressed views, which seek to protect Nine-mile Prairie and our environment in general from pollution, wasteful use and destruction. But if you read between their lines of argument what you find we lose with obliterating the westward vista from Nine-mile prairie is something more human. With the thoughtless changes wrought in our daily and sacred landscapes we drive the very meaning they possess from our lives forever. Build the line, destroy the continuity of the view and no child will ever have the unfettered memory of its prairie vista. He or she (and we) will lose the possibility of making a momentary and fragile connection to the lives of our Native American and pioneer predecessors.

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